



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,353	01/25/2002	Kazuhiro Takeuchi	0171-0814P-SP	9306

2292 7590 10/21/2003

BIRCH STEWART KOLASCH & BIRCH
PO BOX 747
FALLS CHURCH, VA 22040-0747

EXAMINER

WYROZEBSKI LEE, KATARZYNA I

ART UNIT	PAPER NUMBER
----------	--------------

1714

DATE MAILED: 10/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/055,353	TAKEUCHI ET AL.	
	Examiner	Art Unit	
	Katarzyna Wyrozewski Lee	1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on _____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>0702</u> . | 6) <input type="checkbox"/> Other: |

Art Unit: 1714

The following office action will have a rejection over a prior art disclosure, WO 99/67547, which is in German Language. The US equivalent, which is US 6,481,555 contains the same limitation as its German priority document. Although the rejection is over German document, the examiner will cite US as equivalent as well and for the ease of better understanding will incorporate column and line numbers of the US document as its translation.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by HELL (WO 99/67547) [English translation in US 6,481,555].

The prior art of HELL discloses composition for non-asbestos friction material summarized in Table in example (page 9 or col. 4).

Art Unit: 1714

15

	Raw materials	Percentage by weight
	steel wool	15-25
	copper and/or copper alloys	3-20
20	aluminum-zinc alloy	0.5-15
	aluminum oxide	0.5-2
	glimmer powder	5-8
	heavy spar	5-15
	iron oxide	5-15
	tin sulfides	2-8
25	graphite	2-6
	coke powder	10-20
	aramide fibers	1-2
	resin filler powder	2-5
	binding resin	3-7

The composition of HELL has required tin sulfide, graphite, fiber, filler and binder, wherein the amount of tin sulfide is within the range of the present invention.

In the light of the above disclosure, the prior art of HELL clearly anticipates the requirements of claims rejected above.

3. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by CHESTER (US 4,310,452).

The prior art of CHESTER discloses composition for non-asbestos friction material. The composition as summarized in TABLE I comprises following:

TABLE I

40	Nitrile rubber	11.40	parts by volume per 100 parts of material
	Sulphur	3.00	
	Phenol-formaldehyde resin	20.00	
	Steel Fibres	10.00	
45	Mica (K37)	5.00	
	Carbon Black	5.39	
	Silica	6.08	
	Barytes	19.89	
	Graphite	8.48	
	Antimony trisulphide	2.39	
50	Molybdenum disulphide	1.79	
	Copper (powdered)	5.38	
	Tin (powdered)	1.20	

Art Unit: 1714

The composition of Chester comprises binder, fiber, filler, graphite and tin powder in the amount of 1.2 pbw.

In the light of the above disclosure, the prior art of CHESTER clearly anticipates requirements of claims rejected above.

4. Claims 1-3 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by CHESTER (US 4,226,759).

The prior art of CHESTER discloses non-asbestos friction material composition comprising following (TABLE 1, col. 2 and Table II col. 2 and 3):

30	TABLE I	
	Nitrile rubber	12.07 parts by volume
	Sulphur	3.18
	Phenol-Formaldehyde Resin	29.82
	Steel Fibres	10.00
	Carbon Black	5.71
35	Silica	6.44
	Barytes	12.42
	Graphite	8.97
	Antimony trisulphide	2.53
	Molybdenum disulphide	1.90
	Copper (Powdered)	5.70
40	Tin (Powdered)	1.26

In Table II the amount of tin powder is 1.50. The composition of Chester comprises binder, fiber, filler, graphite and tin powder.

In the light of the above disclosure, the prior art of CHESTER clearly anticipates requirements of claims rejected above.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over HELL (WO 99/67547) [English translation in US 6,481,555] in view of either CHESTER (US 4,310,452) or CHESTER (US 4,226,759).

Art Unit: 1714

The discussion of the disclosure of the prior art of HELL from paragraph 2 of this office action is incorporated here by reference.

The difference between the present invention and the prior art of HELL is showing that the tin and tin sulfide can be utilized together.

The discussion of the disclosure of the prior art of CHESTER'452 or CHESTER'759 from paragraphs 3 or 4 of this office action is incorporated here by reference.

Tin powder is a metal powder that is equivalent in its softness to copper or zinc powder. Therefore utilizing tin powder in place of copper powder of HELL will still provide the same purpose.

In the light of the above disclosure, it would have been obvious to one having ordinary skill in the art at the time of the instant invention to utilize the tin powder of CHESTER in the composition of HELL and thereby obtain the claimed invention. Using tin powder instead of copper powder would still produce efficient friction material, since the two powders are both comparatively soft.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The following prior art constitutes 102 rejections and also provides support for examiner's allegation that copper powder is comparative to tin powder. The prior art of record has not been applied, since there are already three 102 rejections pending. The examiner reserves the right to apply these rejections if it is necessary. US 4,743,635 to NAKAGAWA, US 6,534,565 to GARDNER, US 6,228,815 to KASEVAN, US 5,866,636 to NITTO, US 6,022,502 to LOCKHART and US 6,220,404 to HARA.

Art Unit: 1714

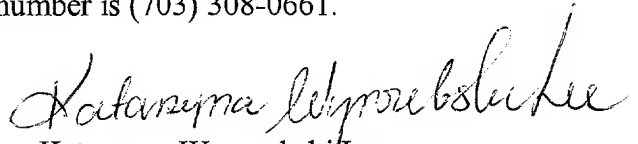
10. European search Report discloses X-references, which are equally applicable against present claims. The examiner feels that the prior art already applied constitutes better prior art and in English. The examiner also reserves the right to apply any of the EP X-references at a later date if it is necessary.

In December 2003 the USPTO office will move to another location in Alexandria. As a result of this move, phone numbers will be changed. New phone number to the examiner of record for this application will be 571-272-1127.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Katarzyna Wyrozebski Lee whose telephone number is (703) 306-5875. The examiner can normally be reached on Mon-Thurs 6:30 AM-4:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (703) 306-2777. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.


Katarzyna Wyrozebski Lee
Primary Examiner
Art Unit 1714

October 15, 2003